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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,580	07/10/2003	Tom Graczyk	P00911-US	1331
3017	7590	03/01/2005	EXAMINER	
BARLOW, JOSEPHS & HOLMES, LTD. 101 DYER STREET 5TH FLOOR PROVIDENCE, RI 02903			SCHWARTZ, PAMELA R	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/616,580	<b>Applicant(s)</b> GRACZYK ET AL.	
	<b>Examiner</b> Pamela R. Schwartz	<b>Art Unit</b> 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
     4a) Of the above claim(s) 26-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-29 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/27/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

*mk*

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-25, drawn to a composition and article made therefrom, classified in class 428, subclass 32.15.
- II. Claims 26-29, drawn to a method of making, classified in class 427, subclass 146.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I (composition claims) and of Group II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a materially different method such as a method of forming a paint by adding the composition of claim 1 together with pigment components.

Inventions of Group II and Group I (the ink jet recording medium) are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be formed by a materially different method such as by cast coating the top layer,

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drying, coating the underlayer on the support and while wet contacting the underlayer with the top layer and drying and peeling the medium from the casting surface.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Holmes on February 25, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-25. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-29 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

It is noted that method claims including all of the limitations of an allowed article claim will be rejoined at allowance.

2. A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 10, 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipate by Kaneko et al. (2001/0004487). The reference discloses an ink jet recording material having one or more coating layers thereon and coating compositions

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for formation of the layers [0017, 0031]. A layer of polymer latex may be formed from an aqueous dispersion of cationic polyurethane resin [0032, 0038]. The composition may contain particles that are fumed silica [0043]. The particles are preferably treated to be cationic [0030]. The particles are present at about 10 to 400% by weight based upon the total weight of latex/resin in the layer [0044]. Based upon the disclosure of the reference concerning the material present in this coating, the range set forth by the reference is considered to inherently overlap with the ranges of claims 1 and 2. The fumed silica has an average particle size of 50 nm or less [0020]. An acrylic polymer may also be present in the composition [0033]. Additives including UV absorbers are disclosed and may be included [0048]. The composition is coated onto a substrate to form an ink receptive layer [0031]. The substrate may be paper with a basis weight of 30-250 g/m<sup>2</sup> [0050-0054].

3. Claims 1-6 and 10-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (2001/0004487). Kaneko et al. is relied upon as set forth above as well as for the following reasons. The reference does not specifically disclose the water absorption of a water-absorptive support [0049]. However, these supports, conventionally paper, are well known in the art, as is the importance of the property of water absorption when imaging with aqueous ink jet inks. It would have been obvious to one of ordinary skill in the art to determine porosity for the support in order to achieve desired drying times and drying characteristics. In addition, the reference discloses that the surface may be a gloss or matte surface but does not disclose gloss values [0057]. This is another property that is well recognized in the art as well as by the applied

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reference. It would have been obvious to one of ordinary skill in the art to determine the glossiness of the support, by modification of additives or by gloss or matte treatments, in order to yield a desired level of gloss in the medium for the intended function of the medium. The reference sets out coating weights for constituents of the coating layer but does not appear to disclose a single weight range for the layer overall [0042, 0044, 0045]. From these disclosures, one of ordinary skill in the art would have been led to from the layer with a coating weight in a range that overlaps with that of claim 15.

Claims 16-19 concern a layer under the ink-receptive layer. In the rejections above, the examiner has relied upon the latex-containing layer of the reference as having the same composition as the ink-receptive layer of the instant claims. The reference also states that a subbing layer may be present under the latex-containing layer [0017]. The materials of applicants' claims 17-19 are those most conventionally used in ink receiving layers of ink jet recording media. Because the reference discloses inclusion of a subbing layer and such layers would conventionally serve the purpose to absorb ink solvent and bind the other layers to the substrate, it would have been obvious to one of ordinary skill in the art to include such a layer and to form the layer from conventional materials for that purpose. It would have been obvious for one of ordinary skill in the art to determine the thickness of the subbing layer in order to achieve sufficient ink solvent absorption and desired handling and feel of the recording medium. Support materials are set forth at [0050-0055].

4. Claims 1, 8, 9, 16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (2001/0004487) for the reasons set forth above and

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further in view of Morris et al. (2003/0003277). The secondary reference discloses an ink jet recording medium having an ink receptive layer containing fumed silica. The reference teaches that it is known to use metal sheets as supports for ink jet recording media. Based upon this teaching it would have been obvious to one of ordinary skill in the art to include a metal sheet as the support in order to render the support reflective. The reference also discusses the net charge of the fumed silica used therein and controlling the zeta potential of the particles so that the zeta potential and the charge on the particles are positive. Since positively charged particles will inherently have a positive zeta potential, the examiner believes that the primary reference inherently possesses the property of claim 9. At any rate, the secondary reference identifies the property as known in the art, the importance of the property [0030], and gives specific values for zeta potential in the examples. Based upon the disclosures of this reference, it would have been obvious to one of ordinary skill in the art to render the fumed silica of the reference sufficiently cationic in order to yield a sufficient level of cationic charge to counterbalance the anionic charge of an ink jet recording ink. With respect to coating pH, the reference examples also teach pH values for the coating layers of an ink jet recording material and the reference teaches the importance of controlling coating pH in order to prevent flocculation or coagulation of the coating composition [0036]. Based upon this teaching, it would have been obvious to one of ordinary skill in the art to control the pH of the coating compositions of the primary reference so that coating is accomplished without flocculation or coagulation.

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5. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (2001/0004487) for the reasons set forth above and further in view of Field et al. (6,420,039). The reference teaches that fumed silica for inclusion on recording media may be made cationic and have its zeta potential controlled by treatment with alumina (see fig. 1, col. 3, lines 51-56, col. 6, line 54 to col. 7 lines 17). Based upon this teaching, it would have been obvious to one of ordinary skill in this art to include aluminum treated silica as the silica of the primary reference as a means of modifying its zeta potential and rendering the silica cationic.

6. Claims 16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (2001/0004487) for the reasons set forth above and further in view of Liebler et al. (5,756,212). The secondary reference teaches that metal coated supports are known in the art for creating a reflective recording medium (see col. 1, line 26- col. 2, line 40). It would have been obvious to one of ordinary skill in the art to include such a support to achieve an optical effect as taught by Liebler et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for



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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

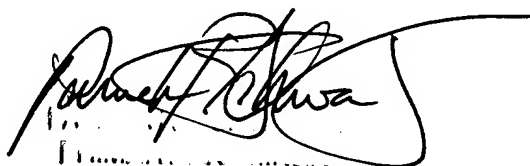
For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz

February 26, 2005

A handwritten signature in black ink, appearing to read "PR Schwartz", with a large, sweeping flourish extending to the right.